



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,967	11/14/2003	Richard A. Proulx	086333.00003	3175
34261	7590	05/08/2006	EXAMINER [REDACTED]	
HOLLAND & KNIGHT LLP 633 WEST FIFTH STREET, TWENTY-FIRST FLOOR LOS ANGELES, CA 90071-2040			DEL SOLE, JOSEPH S	
		ART UNIT 1722		PAPER NUMBER

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

S

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/713,967	PROULX ET AL.	
	<b>Examiner</b> Joseph S. Del Sole	<b>Art Unit</b> 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 May 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-37 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3: Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 28-31 and 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Groff (4,445,838).

Groff teaches an assembly for use in continuously forming a plurality of lengths of extrudate (Fig 1); having a housing (Fig 2); and a plurality of extrusion dies disposed in the housing (Figs 1 and 2), each of the dies defining a hole configuration in the lower end thereof for the extrusion of one or more strands of molten monofilament material therethrough; a fluid flow pathway disposed within the housing adapted for fluid communication with a source of molten monofilament material for directing the material onto the dies (Fig 2); a drive assembly for rotating each of the die at a speed (Fig 2) thereby twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Fig 1), the holes being of equal diameter and connected together at adjacent edge portions (Fig 1).

The Examiner notes that the intended use of an apparatus does not weight in an apparatus claim. Therefore the limitation “for use in continuously forming a plurality of lengths of flexible noise attenuating cutting line for use in rotary vegetation trimmers” is

not considered unless further structural limitations within the claim can only perform thus intended use.

3. Claims 28-34 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Groff et al (4,288,463).

Groff teaches an assembly for use in continuously forming a plurality of lengths of extrudate (Fig 1); having a housing (Fig 2); and a plurality of extrusion dies disposed in the housing (Figs 1 and 2), each of the dies defining a hole configuration in the lower end thereof for the extrusion of one or more strands of molten monofilament material therethrough; a fluid flow pathway disposed within the housing adapted for fluid communication with a source of molten monofilament material for directing the material onto the dies (Fig 2); a drive assembly for rotating each of the die at a speed (Fig 2) thereby twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Fig 1), the holes being of equal diameter spaced apart a distance less than the diameter and connected together at adjacent edge portions (Fig 1).

The Examiner notes that the intended use of an apparatus does not weight in an apparatus claim. Therefore the limitation "for use in continuously forming a plurality of lengths of flexible noise attenuating cutting line for use in rotary vegetation trimmers" is not considered unless further structural limitations within the claim can only perform thus intended use.

4. Claims 28-31 and 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Israel (5,609,903).

Israel teaches an assembly for us in continuously forming a plurality of lengths of extrudate (Fig 1); having a housing (Fig 1); and a plurality of extrusion dies disposed in the housing (Fig 1), each of the dies defining a hole configuration in the lower end thereof for the extrusion of one or more strands of molten monofilament material therethrough; a fluid flow pathway disposed within the housing adapted for fluid communication with a source of molten monofilament material for directing the material onto the dies (Fig 1); a drive assembly for rotating each of the die at a speed (Fig 2) thereby twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Fig 1), the holes being of equal diameter and connected together at adjacent edge portions (Fig 1).

The Examiner notes that the intended use of an apparatus does not weight in an apparatus claim. Therefore the limitation "for use in continuously forming a plurality of lengths of flexible noise attenuating cutting line for use in rotary vegetation trimmers" is not considered unless further structural limitations within the claim can only perform thus intended use.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 32 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Israel et al (5,609,903) or Groff (4,445,838) in view of any of Cockings et al (5,492,706) and Heck et al (5,670,185).

Groff and Israel teach the apparatus as discussed above.

Groff and Israel fail to teach the die holes being spaced apart a distance less than the diameter and the hole having the cross-section of an oblate spheroid.

Cockings et al teach twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and

engagement surface (Figs 1 and 3), the holes being of equal diameter spaced apart a distance less than the diameter (Fig 4) for the purpose of forming a twisted extrusion product. Heck et al teach twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Fig 1) for the purpose of forming a twisted extrusion product.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions of Groff and Israel et al as taught by Cockings et al and Heck et al because utilizing openings shaped as an oblate spheroid and having openings spaced apart a distance less than the diameter of the openings imparts additional, obvious, possible configurations for the structure of the product.

5. Claims 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groff et al (4,288,463) in view of any of Cockings et al (5,492,706) and Heck et al (5,670,185).

Groff et al teach the apparatus as discussed above.

Groff et al fails to teach the die holes having the cross-section of an oblate spheroid.

Cockings et al teach twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Figs 1 and 3), the holes being of equal diameter spaced apart a distance less than the diameter (Fig 4) for the purpose of forming a twisted extrusion product. Heck et al teach twisting filaments by synchronously rotating a die about a

central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Fig 1) for the purpose of forming a twisted extrusion product.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Groff et al as taught by Cockings et al and Heck et al because utilizing openings shaped as an oblate spheroid imparts additional, obvious, possible configurations for the structure of the product.

6. Claims 1-4, 6, 8, 10-15, 17-18, 20-23, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Groff (4,445,838) or Israel et al (5,609,903) in view of any of Cockings et al (5,492,706) and Heck et al (5,670,185) and further in view of any of Machuque (4,217,083).

Groff, Israel, Cockings et al and Heck et al teach the apparatus as discussed above. Furthermore, the Groff et al and Groff references reference teach a planetary gear assembly (Figures 1) and die holes connected by a thin web portion.

Groff and Israel fail to teach a breaker plate disposed in the chamber, the plate defining an inclined inner portion and a substantially planar outer portion, the inner portion directing molten material from the channel onto the outer portion.

Machuque teaches a breaker plate (Fig 1, #16) upstream of extrusion holes and having an inclined inner portion and a planer outer portion, the inner portion directing molten material from the channel onto the outer portion for the purpose of diffusing the material (col 4, lines 1-10).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions Groff and Israel et al as taught

Art Unit: 1722

by Machuque because such breaker plates serve to distribute and or filter material prior to extrusion.

7. Claims 5, 7, 9, 16, 19, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Israel et al (5,609,903) or Groff (4,445,838) in view of any of Cockings et al (5,492,706) and Heck et al (5,670,185).

Groff and Israel teach the apparatus as discussed above.

Groff and Israel fail to teach the die holes being spaced apart a distance less than the diameter, and the die hole configuration in at least one of the dies being different from the die hole configuration in at least one of the other of the dies and the hole having the cross-section of an oblate spheroid.

Cockings et al teach twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Figs 1 and 3), the holes being of equal diameter spaced apart a distance less than the diameter (Fig 4) for the purpose of forming a twisted extrusion product. Heck et al teach twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Fig 1) for the purpose of forming a twisted extrusion product.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions of Groff and Israel et al as taught by Cockings et al and Heck et al because utilizing openings shaped as an oblate spheroid and having openings spaced apart a distance less than the diameter of the

Art Unit: 1722

openings imparts additional, obvious, possible configurations for the structure of the product including different configurations from a single assembly.

8. Claims 1-6, 8, 10-18, 20-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groff et al (4,288,463) in view of any of Cockings et al (5,492,706) and Heck et al (5,670,185) and further in view of Machuque (4,217,083).

Groff et al, Cockings et al and Heck et al teach the apparatus as discussed above. Furthermore, the Groff et al reference teaches a planetary gear assembly (Figures 1), the holes of equal diameter spaced apart a distance less than the diameter and die holes connected by a thin web portion.

Groff et al fails to teach a breaker plate disposed in the chamber, the plate defining an inclined inner portion and a substantially planar outer portion, the inner portion directing molten material from the channel onto the outer portion.

Machuque teaches a breaker plate (Fig 1, #16) upstream of extrusion holes and having an inclined inner portion and a planer outer portion, the inner portion directing molten material from the channel onto the outer portion for the purpose of diffusing the material (col 4, lines 1-10).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions Groff et al, Groff and Israel et al as taught by Machuque because such breaker plates serve to distribute and or filter material prior to extrusion.

9. Claims 7, 9, 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groff et al (4,288,463) in view of any of Cockings et al (5,492,706) and Heck et al (5,670,185).

Groff et al teaches the apparatus as discussed above.

Groff et al fails to teach the die holes configuration in at least one of the dies being different from the die hole configuration in at least one of the other of the dies and the hole having the cross-section of an oblate spheroid.

Cockings et al teach twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Figs 1 and 3), the holes being of equal diameter spaced apart a distance less than the diameter (Fig 4) for the purpose of forming a twisted extrusion product. Heck et al teach twisting filaments by synchronously rotating a die about a central longitudinal axis during extrusion and having a drive cylinder, motor, gears and engagement surface (Fig 1) for the purpose of forming a twisted extrusion product.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions of Groff et al, Groff and Israel et al as taught by Cockings et al and Heck et al because utilizing openings shaped as an oblate spheroid and having openings spaced apart a distance less than the diameter of the openings imparts additional, obvious, possible configurations for the structure of the product including different configurations from a single assembly.

***Response to Arguments***

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on M-F 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph S. Del Sole